

IN THE ABSTRACT:

Please replace the Abstract with the following rewritten Abstract:

--A reactor intended to carry out partial oxidation reactions starting from liquid feedstocks that can go from GPL to gas oil for the purpose of producing synthesis gas is characterized by finely controlled hydrodynamics and a high degree of thermal integration, and comprises an elongated jacket along an axis of any orientation, means (12) for supplying a preheated gas that contains oxygen and optionally water vapor, means (9) for supplying a hydrocarbon feedstock, means (11) for evacuation of a hydrogen-rich effluent, a first internal chamber (5) inside of which is carried out an essentially isothermal partial oxidation reaction that is connected to means (9) for supplying the hydrocarbon feedstock and to means (12) for supplying preheated gas, gas turbulizing means that are suitable for creating a perfect mixing flow, means (8) for linking first chamber (5) to a second chamber (7) with a suitable volume for carrying out a piston flow, linking means (8) that comprise at least one orifice, and second chamber (7) exchanging heat in an indirect manner over at least a portion of its length with means (12) for supplying said thus preheated gas, whereby the second chamber is connected to said means (11) for evacuating the hydrogen-rich effluent, and in which gas supply means (12) comprise an annular chamber that is essentially coaxial with the reactor jacket, and second chamber (7) is essentially coaxial with said jacket.--